

44. Почему пропали ОРИГИНАЛЫ лунной высадки?

15-18 minutes

Those who are interested in the topic of the American landing on the moon know that the originals of the video recordings of the very first historical step of the astronaut on the lunar surface were found. The valuable material was not saved. In a country where the archives tremble with trepidation shots of the walks of the beloved dogs of the Presidents of the United States, kilometers of priceless historical videos suddenly disappeared. Only copies remain.



Barack Obama and Bo's favorite dog.

Let's clarify right away: only the video recordings disappeared. All photos are in place, even defective and overexposed ones - they are re-scanned, numbered and divided into albums. But the videotapes, hundreds of rolls of videotape, were missing.

Defenders of NASA adhere to such a system of defense: "Well, think about it, the originals are gone, there are still copies left."

It's like if you lost your passport before traveling abroad, and you were told: "Just think, I lost the original! You do have a black-and-white photocopy of two pages!"

In this article we will tell you exactly which originals we are talking about, how they looked, and answer a question that (perhaps before us by anyone) has not been covered in detail - "**Why did the originals disappear?**"

In fact, we tend to think that nothing is missing. Not a meter was missing. It's just that the "originals" look so that they cannot in any case be shown even from afar, from a distance of several meters - the deception will immediately be revealed, and the lunar myth will be destroyed.

On the Internet, one can easily find sentimental stories, as in 2006 they **suddenly** discovered that a significant part of the materials filmed by the "lunar television camera" of the Westinghouse mission "Apollo 11" disappeared somewhere. Of course, NASA has launched a massive search campaign. The search, unfortunately, yielded nothing. More than 700 boxes with **video materials, audio recordings and data on the health of** astronauts literally disappeared into thin air.

The stories about how, drop by drop, the hope of finding at least one of the hundreds of missing boxes melted away, were written by an experienced Hollywood screenwriter and are designed to make the reader tears of emotion. I love to read lies when you know the truth.

I can't help but quote a couple of paragraphs from the article ["The mystery of the disappearance of the tapes of the Apollo 11 mission"](#).

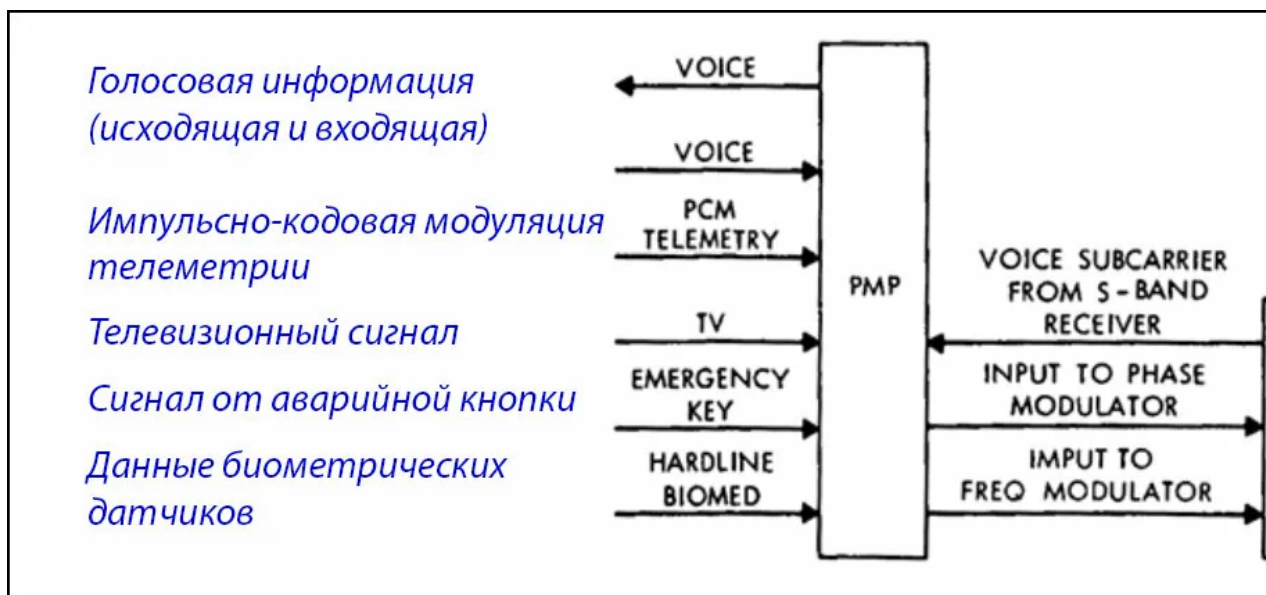
... For a while, the likelihood again arose that the video filming, carried out on the Moon, was not completely lost. "It was like a miracle that came out of nowhere," says Lebar. Since the signal received from the moon had a unique format, such films would be easy to track and identify.

Unfortunately, finding the tapes proved to be a daunting task. After spending several hours at the National Records Center in Washington, Lebar and his colleagues came across an APL employee who claimed to have seen the tapes. When he brought in several unmarked films, which had the same format as the previously known materials, it turned out that these films were blank. The exhausting long-term study of the attendants' logs, forms, service notes and any other written evidence 40 years ago did not give any results either. It seemed that the tapes had sunk into oblivion - three years of search work carried out in government agencies, industrial companies, as well as among individuals, did not bear fruit. In the end, the seekers gave up.

... "I don't think the films have survived to this day. - Lebar says, - It's hard to accept. But we were faced with an overwhelming amount of evidence that led us to believe that the tapes no longer exist. You just need to come to terms with reality. "

Now let's figure out what exactly is missing.

According to NASA legend, a signal was sent from the Moon to the Earth in the form of a single S-band ("S" from the word "Short-band"). Astronaut health data, voice, telemetry, television and rangefinder information, as well as control and tracking were transmitted over one frequency system, through one antenna.



Components of a single signal.

On Earth, this single signal, according to NASA legend, was received by a radio telescope and recorded on a tape recorder.



Radio telescope at the Goldstone tracking station (USA).

Since the amount of data was very large, the tape of the tape recorder moved at a high speed - one coil with a diameter of 35 cm was enough for only 15 minutes. As one coil filled up, the next recorder was automatically connected, and to ensure data continuity, it began to record data with a slight overlap.



The 14 "(35 cm) diameter coils used 1" (2.5 cm) wide magnetic tape.

On this tape were recorded not only video reports from the Moon, but also audio communications, and telemetry (data from hundreds of sensors), and even the health status of astronauts (heart rate, breathing rhythm, etc.). And now it was all gone. In 2006, NASA announced that the original recordings were likely to be irretrievably lost. Also, by **accident**, records of other lunar expeditions disappeared - a total of 10,000 to 13,000 magnetic tapes with information about the Apollo missions. NASA said their trail was lost sometime between 1970 and 1975 when the boxes were returned to NASA from the National Archives.

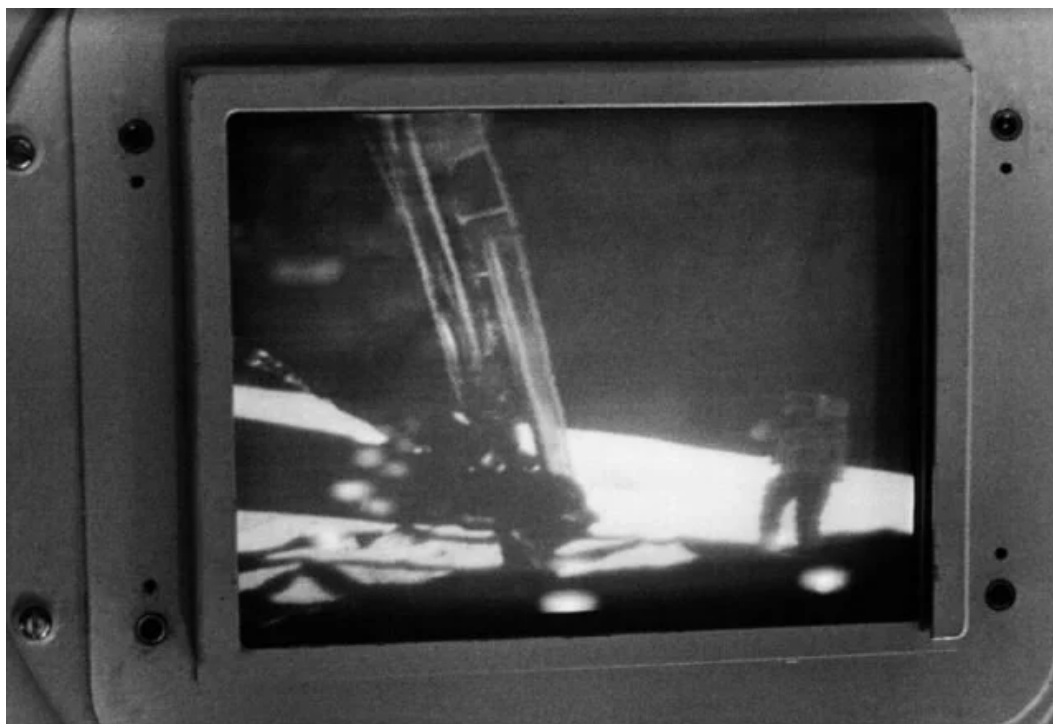


This is how the missing ORIGINALS allegedly looked like magnetic tape reels.

According to NASA, most likely, the materials in question were accidentally erased, and the tape on which they were contained was used to record data obtained by some satellite. Of course, this explanation seems more than absurd: how could an agency that spends billions of dollars on a wide variety of research projects not have an ordinary clean magnetic tape?

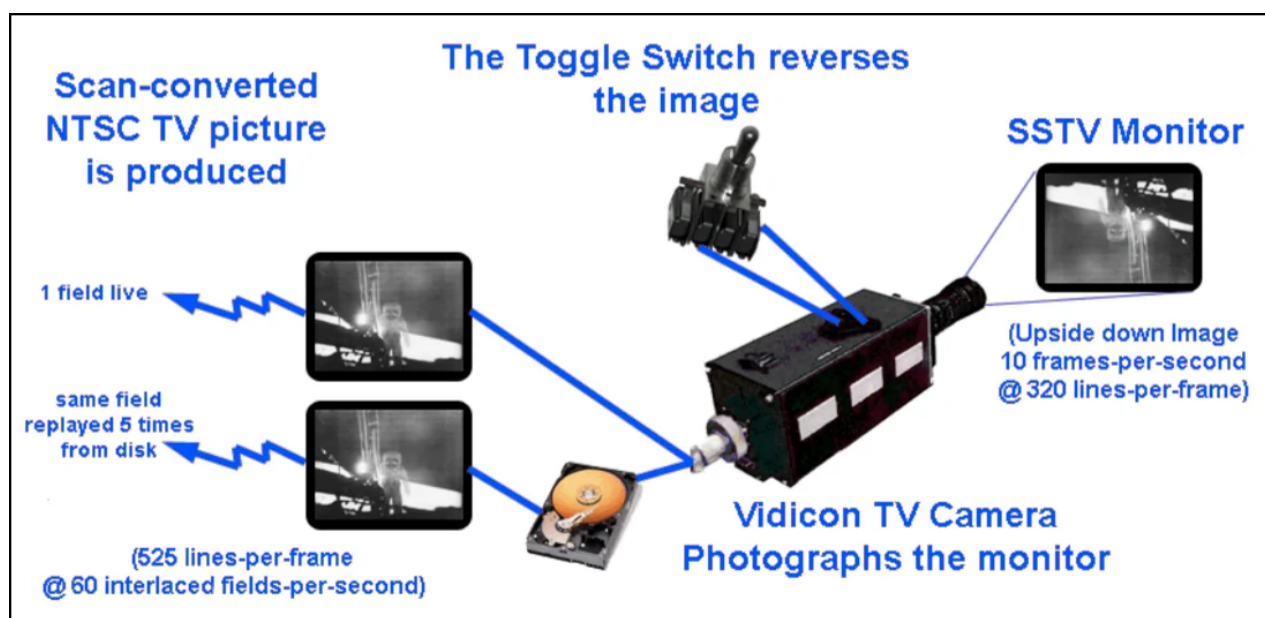
And what has survived? Preserved, relatively speaking, "photocopies", reshoots from the screen.

The video image of small-frame television, received from the Moon, according to NASA assurances, was displayed on the screen of a cathode-ray tube (monitor).



An unconverted image on a CRT screen, supposedly straight from the moon.

But since the image was not standard, neither in the number of lines (320), nor in the number of frames per second (10), it was impossible to broadcast it immediately. To convert it into a broadcast TV signal and show it to viewers, the monitor was re-filmed with a video camera operating in the standard US broadcast format NTSC (525 lines, 60 fields per second). 320 lines had to be turned into 525, and 10 frames per second had to be multiplied to 60. Such operations were carried out using a scan converter. We talked about this in detail in the article "[Could the Soviet Union receive a television report from Apollo 11 recorded in American format?](#)".



Converting a small-frame television signal to the NTSC broadcast standard. (For explanations, see the previous article, No. 43).

The image from the monitor was re-captured by a TK-22 TV camera and recorded on a VCR. And this record, a reshoot of the original ("photocopy") has been preserved. None of this reshoot was missing, not a box, not a meter.



TV camera TK-22. RCA lettering - Radio Corporation of America


At first glance, the TK-22 TV camera, which was used to shoot from the monitor, is a very strange TV camera - a parallelepiped with a lens and nothing else. It is not clear where the cameraman should look - there is no sight, there are no control knobs for the TV camera.

And this, in fact, is not a television camera in the conventional sense, it is a scanner. In the catalog it goes under the name telecine for telecine. Telecine is the translation of an image from a film strip into a television signal.

Such a television camera is attached to a movie projector.



The television camera is mounted on a movie projector.

| | | |
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|  | 1964 | <p>TK-22- B&W Vidicon, transistors. One of the most famous TV pictures ever seen was through a TK-22...but it wasn't from film. The camera was part of the scan converter used for the video feed from the Apollo 11 lunar module. <u>TK-22 configured directly on a TP-66 film projector</u></p> |
|--|------|---|

The TK-22 camera, released in 1964, is known for reshooting the Apollo 11 mission. It was mounted on a TR-66 film projector.

This is how this telecine construction looks in its entirety.



The TK-22 television camera (right) is rigidly attached to the TR-66 16-mm film projector.

What are such installations for, I think you guessed it. Films are constantly shown on television. Until recently, all films were filmed. In any case, since the invention of cinematography, for 100 years, cinema has been filmed on film. When television became widespread in the 1950s, films began to be shown on television. To convert the film format to television, the Telecine installation was used.

Since the TV screen is very small - it cannot be compared with the screen in a movie theater (where the width can be more than 20 meters) - a high quality film image is not required. Films in 16 mm format are usually used for translation.

Let's estimate approximately the resolution of the TV screen. In our country on September 3, 1948 in Moscow [an experimental television broadcasting equipment was launched](#) according to the standard of decomposition into 625 lines of 50 fields. This is also the European standard.

Translating into understandable to a modern person ideas about the resolution of monitors, we can say that television in our country for 70 years had a resolution of approximately 800 x 600 pixels. Professional television cameras Betacam, until recently the most common on television, had a frame size of NTSC - 720 × 486, in PAL - 720 × 576.



Betacam TV camera.

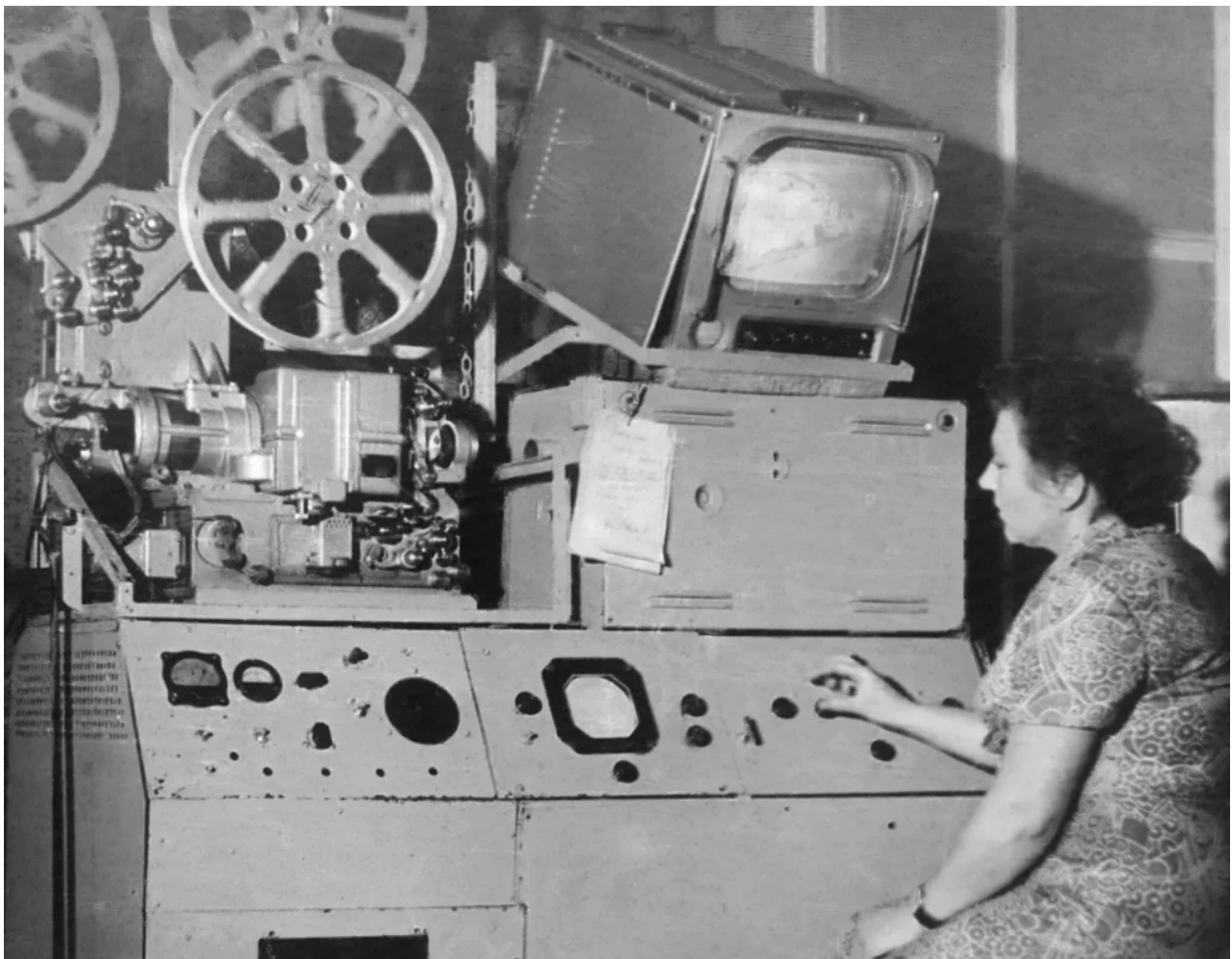
Due to this resolution, a 16mm film copy is sufficient for high-quality screening of the film on television.

Many reports for television were filmed on special 16 mm reversible film, for example, VNF (Video News Film), and then translated into television. I still remember the times (80-90s of the XX century) when such film was processed at the Ostankino television center.



16mm film for reporting and news filming. Roller (122 m) for 10 minutes.

When films were shown on television, 600-meter reels were used on film projectors in television centers. At a standard speed of 24 frames per second, such a reel could hold approximately 1 hour of time (55.6 minutes). The film was shown on television at 25 fps. 600 meters is 53.4 minutes. The motion picture without recording on videotape was immediately shown on the air. When one reel came to an end, another was connected through an optical switch.



End of the 50s. XX century. Central control room of the Vladivostok television studio. Photo: GTRK Vladivostok

Of course, there were installations for telecine and 35-mm films. Here, installation from [collections of the laboratory of](#) radio equipment and circuitry (ROS) of the Moscow Technical University of Communications and Informatics (MTUCI).



Installation of telecine ROS MTUSI.

Here is a more modern installation of the Gorky film studio. The film is installed in a "cabinet" in the back of the room, behind glass doors, to avoid dust from outside.



Installation of the TV film studio named after Gorky.

And, of course, there is such a telecine installation at VGIK, where I have been working as a teacher for 30 years.



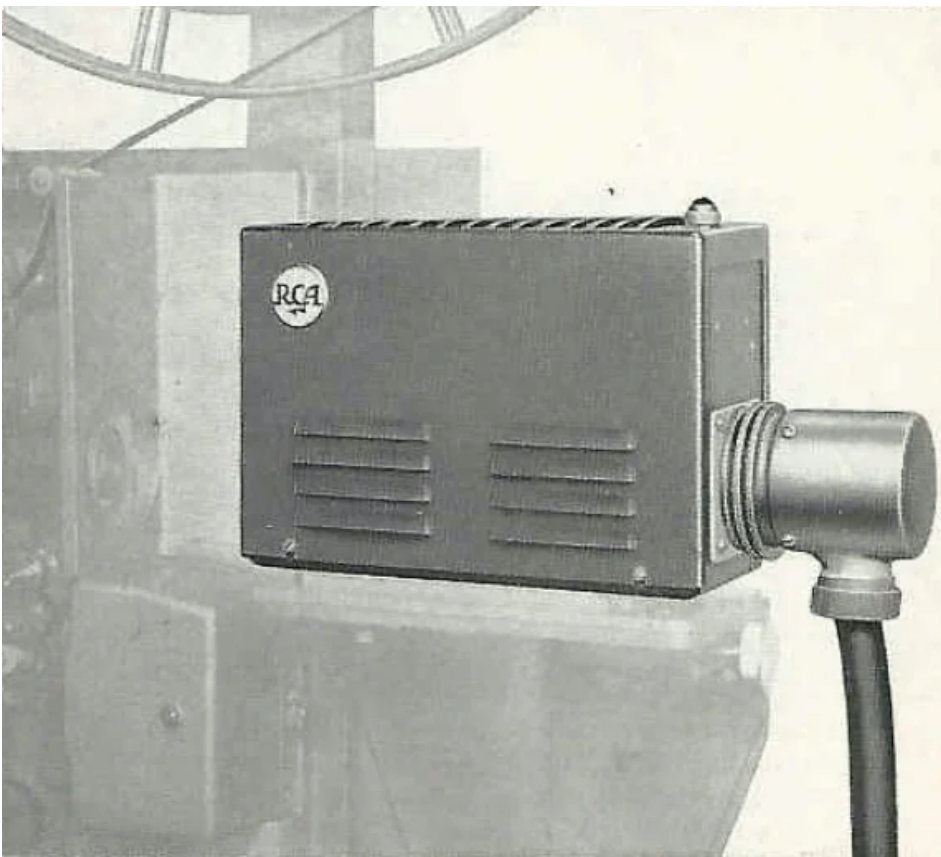
Installation of telecine at the VGIK Educational Film Studio. Behind a glass partition in the background is a film scanner.

To avoid dust ingress, the film and scanner compartment is located behind a glass partition. The installation allows you to work with both 35-mm film and 16-mm.



600-meter "pancakes" for film. The space is fenced off with glass.

And here is what the US telecine installations looked like in the 60s of the twentieth century.



Attaching a TV camera to a movie projector.

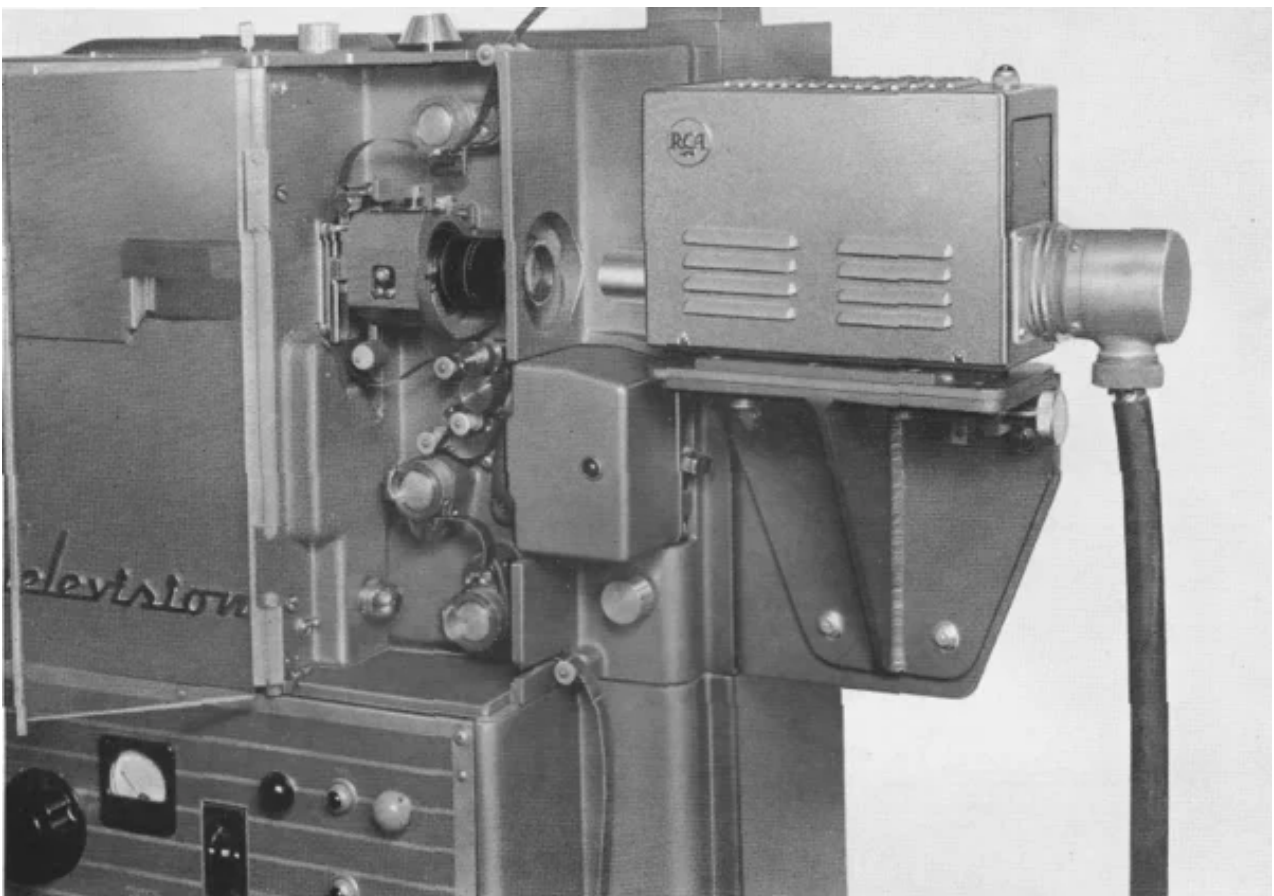
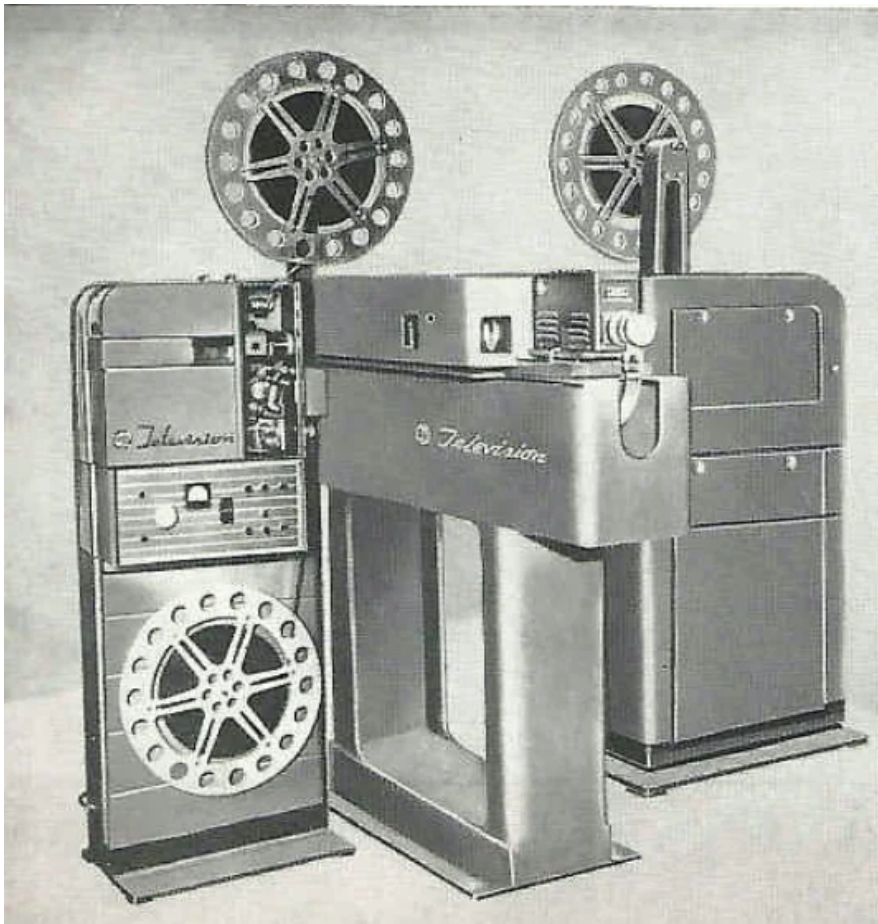


FIG. 1. View of the Vidicon Film Camera shown coupled to an RCA TP-5A Professional 16mm Television Projector.

The TV camera is mounted on a professional 16 mm film projector.



General view of the telecine installation.

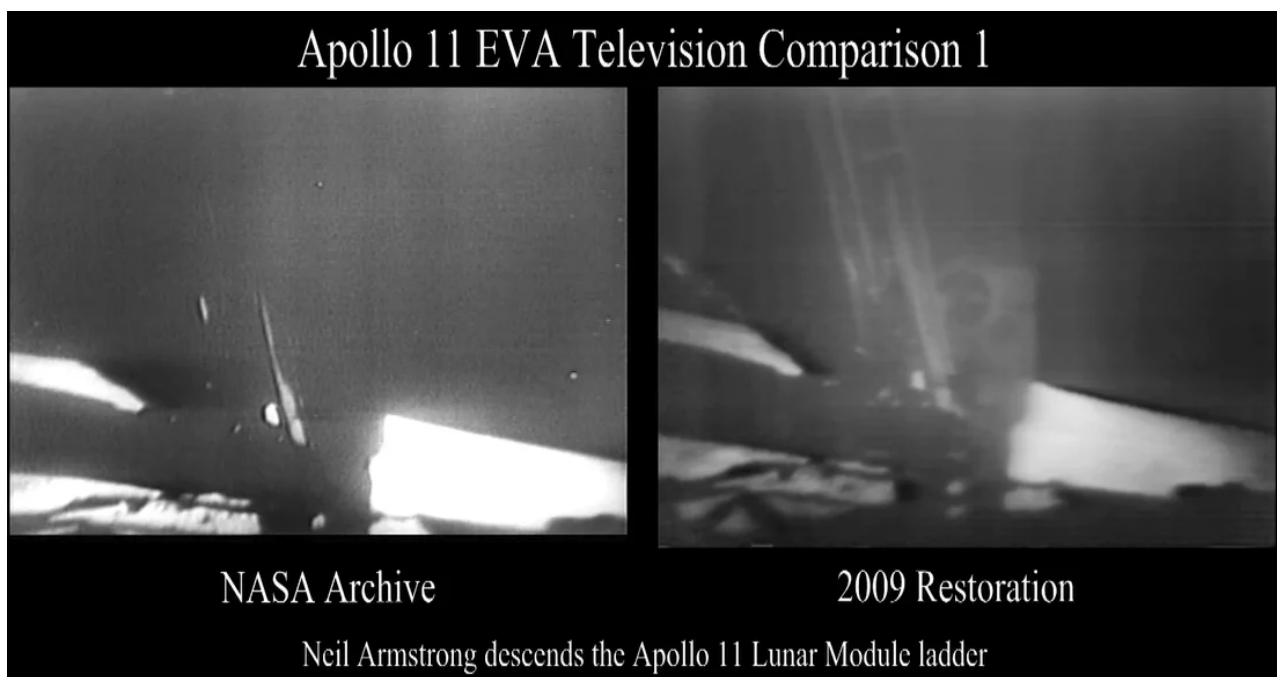
About a year ago, we already wrote in the article "[NASA claims the "live stream from the moon" was filmed in one continuous shot. But this is not true.](#)" that the entire report from Apollo 11, lasting 2.5 hours (143 minutes), was filmed not with a TV camera, but with film equipment, on 16 mm film. We even considered that at a speed of 10 frames per second , the entire "live broadcast" will be 643.5 meters long and fit on a 600-meter reel.



600m reels with 16mm film.

What facts indicate that this is not a TV recording, but a movie? In the image of "Armstrong's descent down the ladder" we see chaotically flickering white dots. It's just dust on film. The film is electrostatic and attracts the smallest dust particles floating in the air. Now, when driving the film, the film is covered with a glass box so that no dust gets from outside, and earlier there was no such device on Telecino installations. These white dots (sometimes black ones) are not at all like defects in TV images, but they look exactly as they do on film.

In 2009 (to the 40th anniversary of the lunar scam), Lowry Digital, taking \$ 230,000 for the work, restored the image: removed all the dust, made the "picture" more contrasting and sharper. Here [video clip](#) for comparison, taken from the NASA website.



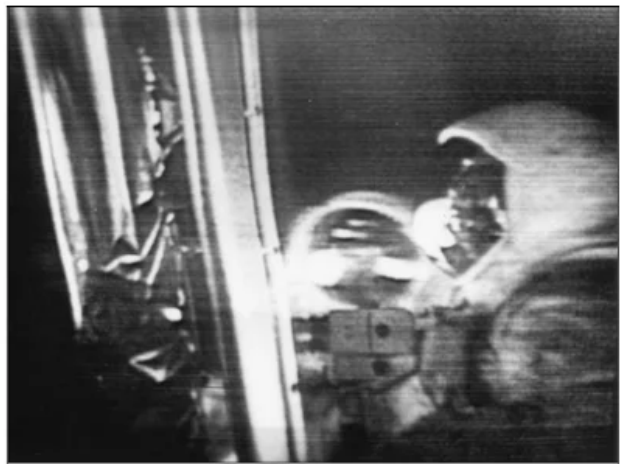
Left - an image from NASA archives before restoration, white dots are visible on it across the frame.
On the right is the image after restoration.

It can be assumed that during the restoration, artificial intelligence (neural networks) completed objects that did not exist in the source code, because neither the staircase nor the astronaut is visible in the frame on the left. But another assumption will be much closer to the truth - the restoration consisted in the fact that the same ORIGINAL was taken from the NASA archive on 16-mm film and re-scanned, while removing artifacts in the form of dots and frame shifts, which we wrote about in detail in [last year's article](#) .

Here's what else confuses me on the frames of the "live broadcast" - the lack of a line scan. We mean, of course, footage without restoration, that has been shown on television for 40 years. It seems, theoretically, according to all NASA reports, the line scan should become more noticeable during conversion - after all, 262 should remain from the initial 320 lines.



Original 320 line, 10 frame per second Parkes Image, GET
109:52:35



Scan Converted 525 line, 30 frame per second Image, GET
109:52:30

Left - the original video, as if straight from the moon, 320 lines. On the right is 525 lines converted for US television (262 actually remained).

There should be something similar to what we saw in the movie Robocop (1987).



Shot from the movie "Robocop", 1987

And we do not feel this line scan at all. Where did she go - it's not clear ... Maybe someone will explain?

And as for the missing originals in the form of 10,000 or 13,000 reels of magnetic tape, they simply did not exist! This is just a myth, another NASA invention. In order to somehow get out into our information age, they simply came up with a fairy tale that all the records disappeared at once, suddenly they took it - and disappeared. The cleaning lady is probably to blame.

Output.

We believe that the video reports allegedly from the Moon during the Apollo 11 mission and other missions were actually filmed in the pavilion not with a TV camera, but with a 16-mm film camera. And then the filmed film on a telecine was converted into a television format.

And since initially there were no TV reports and recordings of all telemetry in a single range on magnetic tape, they had to come up with the idea that these several thousand reels of magnetic tape suddenly suddenly disappeared.

There was a scan converter, there was a translation from one format to another, there was a TK-22 TV camera in a scan converter. But the translation was not from low-frame television 320 lines, 10 fps, but from 16-mm film into the NTSC broadcast television format.

*

PS What was missing could look like this (if it existed):



Может это быть правдой? Первое межпланетное путешествие человечества и научные данные пропали?
Космический центр им. Р.Годдарда, архив.

*

Cameraman L. Konovalov was with you. Until next time!

ДИПЛОМ

С ОТЛИЧИЕМ

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